GAME NO. 866
FEBRUARY, 1980

MIDWAY'S

Galaxian

PARTS AND OPERATING MANUAL



MIDWAY MFG. CO.
A BALLY COMPANY
10750 WEST GRAND AVENUE
FRANKLIN PARK, ILLINOIS 60131
U.S.A.

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WARNING

THIS GAME MUST BE GROUNDED. FAILURE TO DO SO MAY RESULT IN DESTRUCTION TO ELECTRONIC COMPONENTS.

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GENERAL INSTRUCTIONS FOR "GALAXIAN"

INSTALLATION

1. Remove shipping cleats located on bottom of cabinet.
2. Install four (4) provided leg levelers to bottom of cabinet and level cabinet.
3. The power is controlled by a switch located on top of the cabinet. Additional taps have been provided on the transformer to compensate for fluctuating line voltage

LINE VOLTAGE SAFETY SWITCH

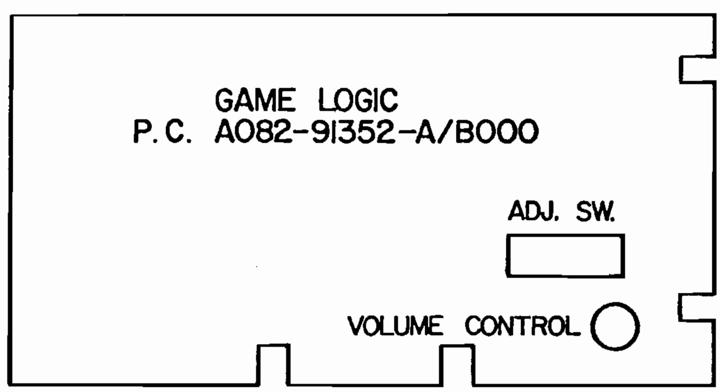
A line voltage safety switch has been provided for your protection. It is located on the right rear side of the cabinet in the back door area. When the back door is removed, it opens the circuit to the line voltage. To restore power (when servicing), pull switch fully out.

VOLUME CONTROL

The volume control pot is located on the Game Logic Board (P.C. A082-91352-A000). This pot controls the volume of all sounds and may be varied as desired by rotating pot control.

ADJUSTMENT SWITCHES

Located on Game Logic Board (P.C. A082-91352-A000) and may be adjusted as indicated on separate instruction card in back box area.



TO REMOVE CONTROL PANEL AND MONITOR DISPLAY GLASS

1. Open coin door.
2. Release two (2) clamps located below Control Panel on each side of cabinet.
3. Disconnect control panel jack.
4. Remove control panel.
5. Remove monitor display glass.

CREDIT PUSH BUTTON SWITCH

Located in cash box area and is readily accessible by opening coin door. This switch is provided as a test aid and awards one credit without advancing coin meter.

TEST SLIDE SWITCH

Located in cash box area and is readily accessible by opening coin door. When placed in "on" position this switch initiates test mode.

GAME BOARD TEST

If game board is good, the following information will be displayed on the screen:

OK
Coin Adjustment Setting
Bonus Adjustment Setting
No. of Galaxip Per Game Setting

RAM/ROM TEST

If any of the Rams or Roms are faulty, the following information will be displayed on the screen:

"Bad Ram 1" – indicates bad Ram at location 7N or 7P.
"Bad Ram 2" – indicates bad Ram at location 3F or 3H.
"Bad Ram 3" – indicates bad Ram at location 4FH or 5FH.
"Bad Ram" – indicates bad Rom on memory board.

*NOTE: Early models were not equipped with memory boards. In these models, "Bad Rom" indicates bad Rom at location 7F or 7H.

CONTROL PANEL AND COIN SWITCH TEST

To verify operation of any switch, close switch in question. If the switch is operating properly, a game sound will emit when closure is made.

CAUTION: Be sure to return test switch to game mode when all tests are completed.

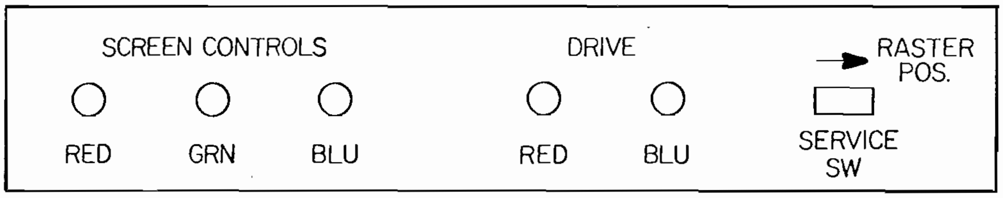
M051-00866-A012

MONITOR ADJUSTMENTS

Degaussing:
All monitors are equipped with an automatic degaussing circuit which effecitvely demagnetizes the picture tube each time the monitor is turned on. The degaussing circuit will operate automatically each time the game is turned on after having been off for at least five (5) minutes. The degaussing is confined to the picture tube since the coils are mounted on the ferrous tube shield. Should any part of the chassis of cabinet become magnetized, it will be necessary to degauss the affected area by means of a manual degaussing coil. Move the coil slowly around the parts to be demagnetized, then slowly withdraw the degaussing coil for a distance of six (6) feet before disconnecting the coil from the A.C. power supply.

Purity Adjustments:
If degaussing fails to improve bad color, check for purity as follows. Position monitor to be facing

either north or south. Purity adjustments are most accurate while observing RED FIELD ONLY. Remove the interface printed circuit connector at the monitor. Turn BLUE and GREEN screen controls (shown below) fully counterclockwise.



To obtain RED field, place service switch in RASTER position. Next, adjust the RED screen control to sufficient brightness to observe purity.

Loosen the yoke and slide the yoke back against the convergence coils assembly. Adjust for a uniform RED area in the center of the screen by spreading or rotating the purity magnet assembly located on the BLUE lateral magnet housing assembly.

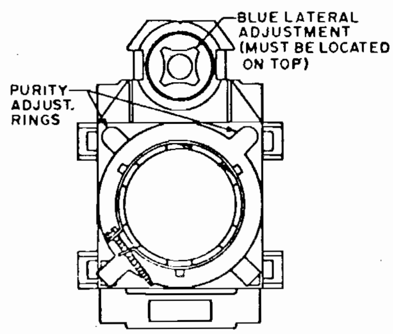


FIGURE A

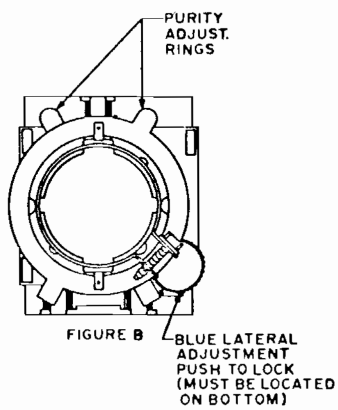


FIGURE B

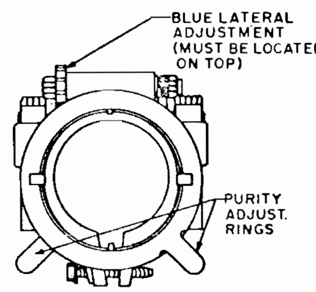


FIGURE C

—Alternate Blue Lateral Magnet and Purity Ring Assemblies

Spreading the tube increases the magnet strength and moves beams in a radial direction. Rotating the purity magnets moves beams in a circular path.

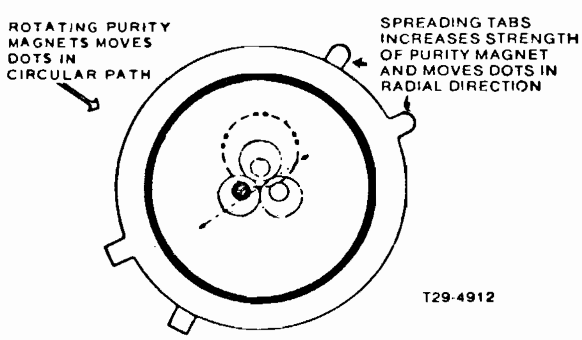


Figure 4.—Center Landing Adjustments

After purity has been attained, slide yoke toward the picture tube bell while observing entire screen. Position yoke for the best overall RED screen and tighten yoke. Preactivate BLUE and GREEN guns and observe all three beams. If the screen is not a uniform white, repeat purity adjustments. Place service switch in NORMAL position and reconnect interface connector at monitor.

CONVERGENCE ADJUSTMENTS:

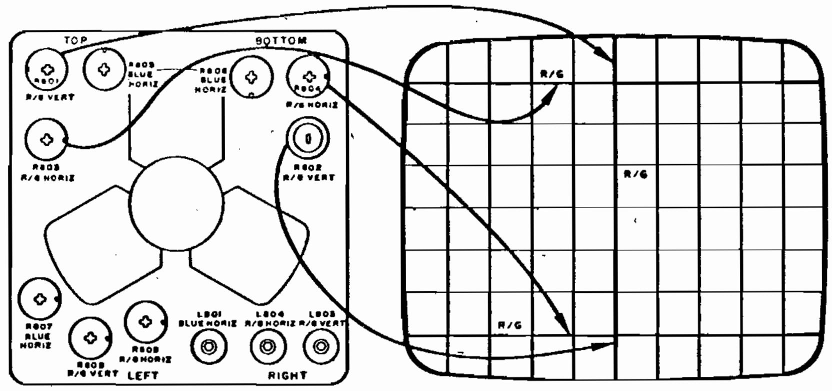
Before performing convergence adjustments, the monitor must be preheated for at least five (5) minutes. The convergence service switch is located to the right of the cash box and is accessed by opening coin door. Turn this switch momentarily "ON" then "OFF". When the crosshatch pattern appears on the screen, turn the service switch back to the "ON" position. The crosshatch pattern will now remain on the screen.

Converge the monitor as follows:

CONVERGENCE

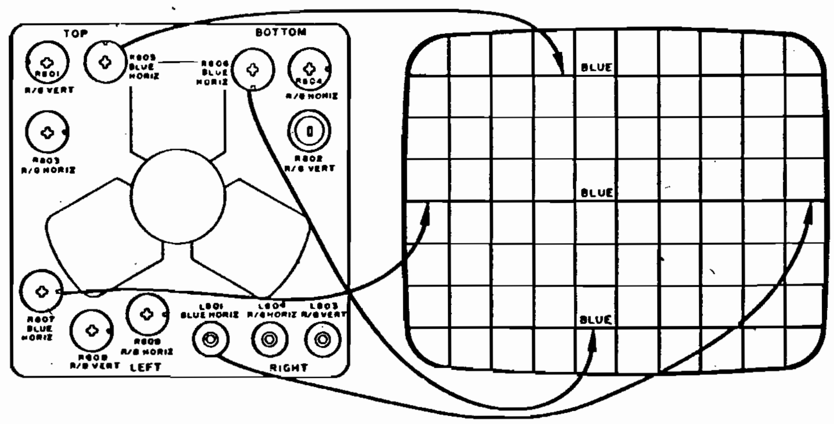
1. Use either crosshatch or dot pattern for center convergence.
2. Converge center of screen with red, green and blue magnet and the blue lateral magnet.
3. Adjust R801 and R802 for convergence (parallelism) of R/G vertical center line.
4. Readjust center convergence if necessary.
5. Adjust R804 to converge bottom R/G horizontal lines and R803 to converge top R/G horizontal lines at center line of screen.
6. Adjust R807 and L801 for straight horizontal blue center line.
7. Adjust R806 and R805 for uniform displacement of blue horizontal lines along center vertical lines.
8. Converge blue horizontal lines with R/G horizontal lines by adjusting the blue convergence magnet. Adjust red and green magnets if necessary.
9. Repeat steps 6 through 8 if necessary.
10. Adjust alternately L803 and R809 for right and left side convergence of R/G vertical lines.
11. Adjust alternately L804 and R808 for convergence of R/G horizontal center line.
12. Converge center of screen and repeat steps 10 and 11 if necessary.
13. Minor touch-up adjustments may be made using the appropriate controls.

SERVICE ADJUSTMENTS



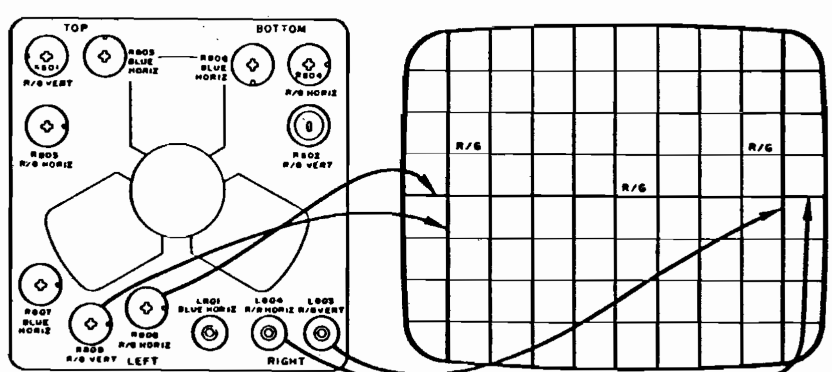
STEPS 3 AND 5 ADJUSTMENTS

Figure 8.—Effect of R801, R804, R803 and R802 Adjustment



STEPS 6 AND 7 ADJUSTMENTS

Figure 9.—Effect of R807, L801, R806 and R805 Adjustment



STEPS 10 AND 11 ADJUSTMENTS

Figure 10.—Effect of L803, R809, L804 and R808 Adjustment

When monitor is satisfactorily converged, return service switch to "OFF" position, (game mode).

SWITCH ADJUSTMENTS

PROGRAM NO. 1

METHOD OF PLAY	SW. 1	SW. 2
1 COIN = 1 PLAY	OFF	OFF
2 COINS = 1 PLAY	ON	OFF
1 COIN = 2 PLAYS	OFF	ON
FREE PLAY	ON	ON

BONUS GALAXIP	SW. 3	SW. 4
NO BONUS GALAXIP	OFF	OFF
BONUS GALAXIP AT 4000 PTS.	ON	OFF
BONUS GALAXIP AT 5000 PTS.	OFF	ON
BONUS GALAXIP AT 7000 PTS.	ON	ON

NUMBER OF GALAXIP PER GAME	SW. 5
3 GALAXIP PER GAME	OFF
5 GALAXIP PER GAME	ON

M051-00866-A006

PROGRAM NO. 2

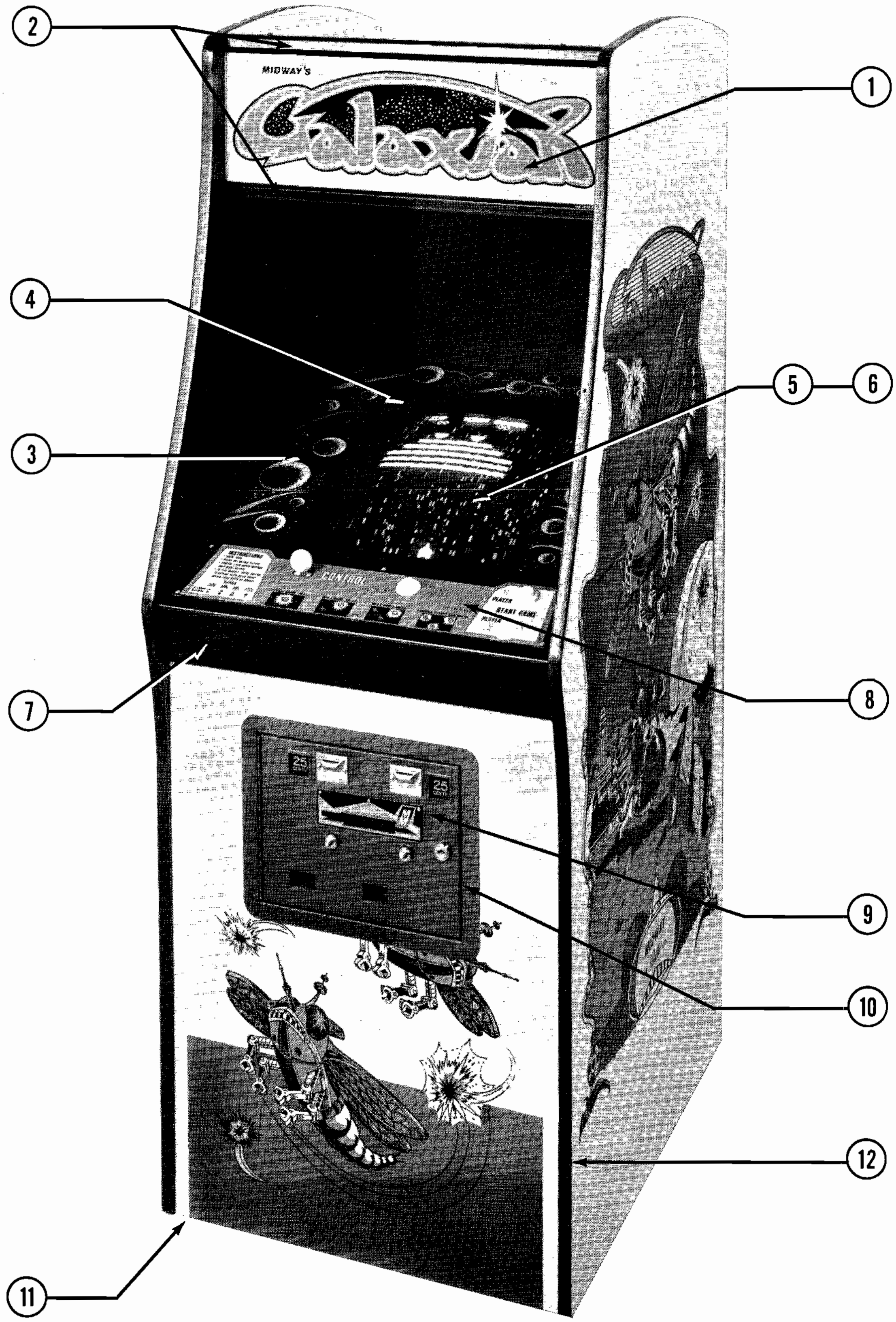
METHOD OF PLAY	SW. 1	SW. 2
1 COIN = 1 PLAY	OFF	OFF
2 COINS = 1 PLAY	ON	OFF
1 COIN = 2 PLAYS	OFF	ON
FREE PLAY	ON	ON

BONUS GALAXIP	SW. 3	SW. 4
NO BONUS GALAXIP	OFF	OFF
BONUS GALAXIP AT 3000 PTS.	ON	OFF
BONUS GALAXIP AT 4000 PTS.	OFF	ON
BONUS GALAXIP AT 5000 PTS.	ON	ON

NUMBER OF GALAXIP PER GAME	SW. 5
2 GALAXIP PER GAME	OFF
3 GALAXIP PER GAME	ON

M051-00866-A005

NO. 866 – GALAXIAN – FRONT PICTURE



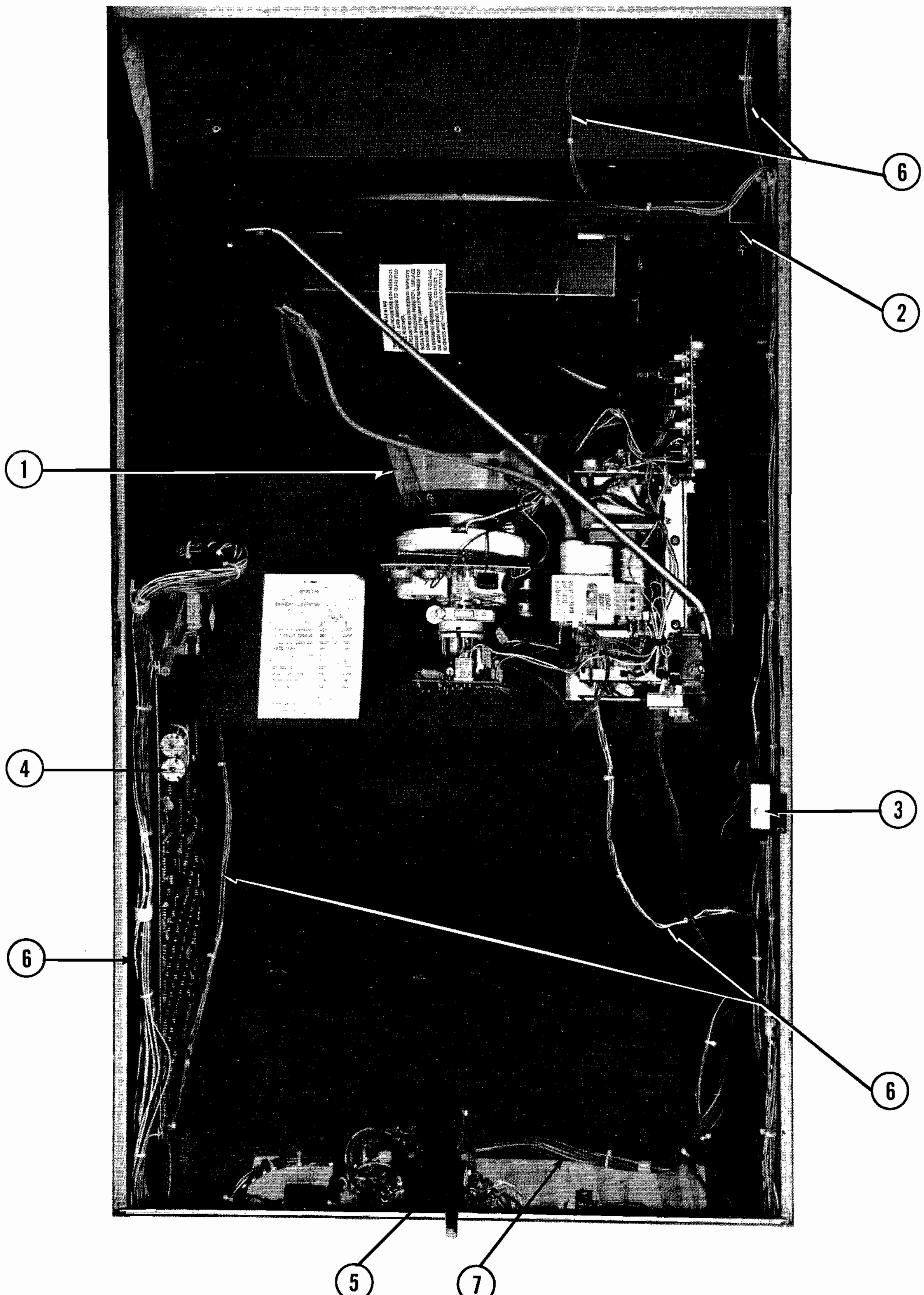
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NO. 866 – GALAXIAN – FRONT PICTURE

ORDER BY PART NUMBER ONLY

ITEM	PART №	DESCRIPTION
1	0866-00901-0000	UPPER DISPLAY PLEXI - 23" x 9" x 3/16"
2	0866-00103-00XF	PLEXI RETAINING BRKT. (2 REQ'D.)
3	0866-00900-0000	MAIN DISPLAY PLEXI - 2-1/8" x 23" x 3/16"
	M052-00050-0005	SPONGE RUBBER TAPE - 1/4 x 23" LG.
4	0866-00904-0000	T.V. BEZEL
5	0851-00904-0000	DISPLAY PLEXI (SMOKED) - 17-3/8" x 14"
	M052-00090-0001	DOUBLE COATED TAPE - 1/2 x 17" LG.
6	0017-00003-0294	19" COLOR MONITOR - COMPLETE
7	0866-00902-00XF	CONTROL SHELF OVERLAY
	0017-00101-0639	#8 - 32 x 1-1/4 CARRIAGE BOLTS (6 REQ'D.)
	0017-00104-0022	#8 WASHER (6 REQ'D.)
	0017-00103-0061	#8 - 32 HEX NUT W/SEMS. (6 REQ'D.)
	0017-00101-0775	#6 x 1/2 PHIL. PAN HD. SCREW (2 REQ'D.)
8	0866-00903-0000	DECORATIVE CONTROL PANEL
9	A090-00020-2001	DOUBLE ENTRY COIN DOOR ASSY.
	A090-00057-0000	COIN DOOR COUNTER METER ASSY.
10	0090-00002-02GR	COIN DOOR FRAME
	0017-00101-0555	#6 - 32 x 5/16 HEX HD. S.M.S. (3 REQ'D.) (MOUNTS COIN DOOR TO FRAME)
11	0017-00102-0048	LEG LEVELERS (4 REQ'D.)
	0017-00103-0026	LEG LEVELER NUTS (4 REQ'D.)
12	0098-00900-0200	T-MOLDING - GREEN
		NOT SHOWN LIST
	0017-00003-0187	6" x 9" SPEAKER - 8OHM, 9W.
	0017-00009-0393	BLACK SPEAKER GRILL W/4, 1-1/2" SCREWS
	0017-00009-0033	LATCH CLAMP (2 REQ'D.)
	0603-00131-0000	STRIKE (2 REQ'D.)
	0586-00036-0000	ON-OFF SWITCH
	0567-00106-0100	SWITCH MTG. PLATE
	0017-00101-0025	#8 x 1/2 SLOT. HEX HD. WD. SCR. (4 REQ'D.)
	A866-00036-0000	TEST SWITCH & BKT. ASSY.

NO. 866 – GALAXIAN – OPENED BACK PICTURE

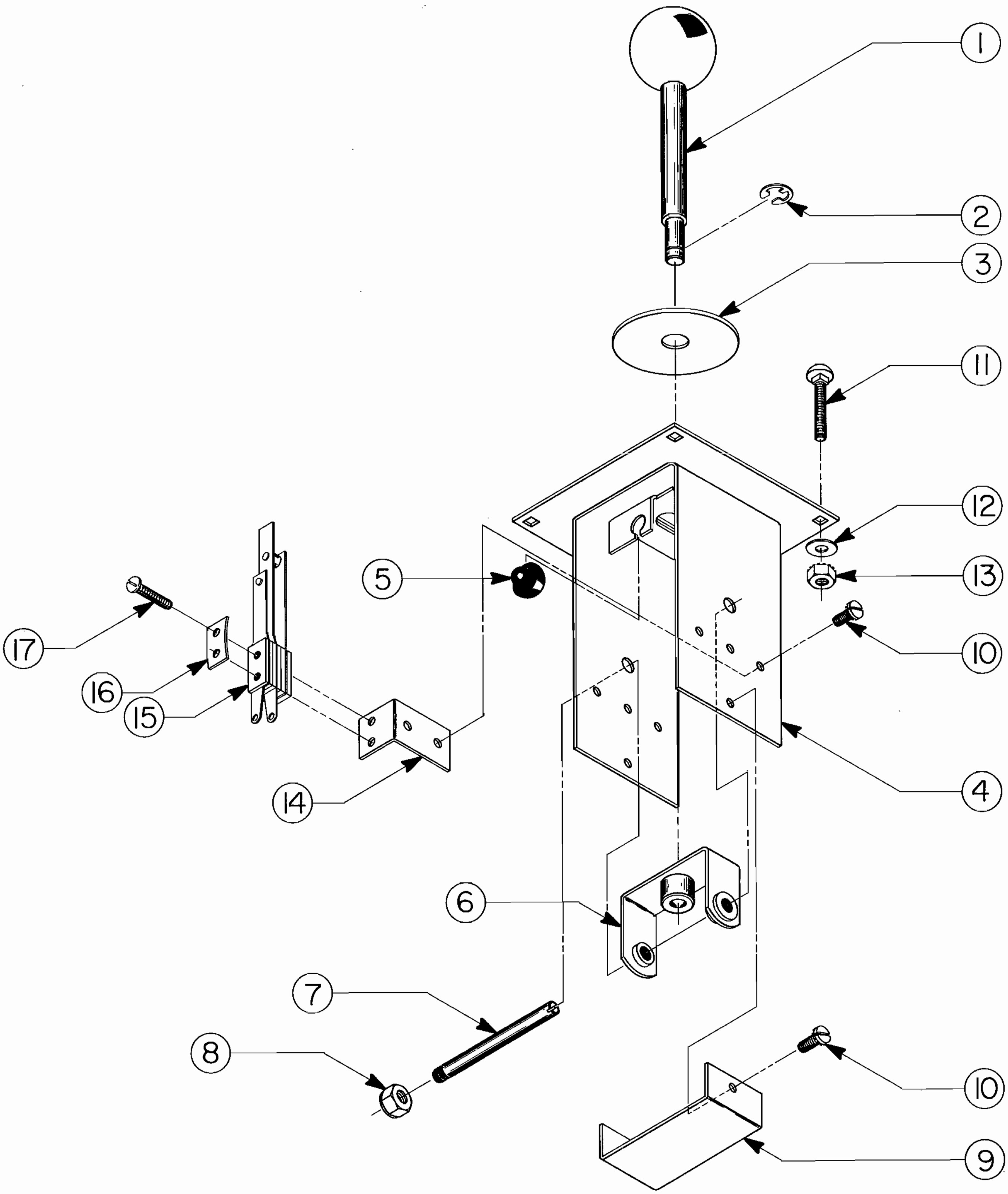


NO. 866 – GALAXIAN – OPENED BACK PICTURE

ORDER BY PART NUMBER ONLY

ITEM	PART Nº	DESCRIPTION
1	0017-00003-0294	19" COLOR MONITOR & CHASSIS - COMPLETE
2	0866-00109-0000	MONITOR MTG. BRKT.
	0017-00101-0115	#8 - 32 x 2" HEX MACH. SCREW (5 REQ'D.)
	0017-00101-0639	#8 - 32 x 1-1/4 CARRIAGE BOLT
	0017-00101-0628	#8 - 32 x 3/4 CARRIAGE BOLT (4 REQ'D.)
	0017-00104-0022	#8 WASHER (10 REQ'D.)
	0017-00103-0061	#8 - 32 HEX NUT SEMS. (10 REQ'D.)
3	A866-00035-00XF	INTERLOCK SW. BRKT. ASSY.
	0017-00032-0071	INTERLOCK SWITCH
4	A082-91352-A866	GAME LOGIC BOARD ASSY.
	0624-00902-0600	P.C. SUPPORT BRKT. - 17" (2 REQ'D.)
	0624-00902-0300	P.C. SUPPORT BRKT. - 2-1/2" (2 REQ'D.)
5	A866-00048-0000	TRANSFORMER BOARD ASSY.
6	A866-00054-0000	LOW VOLTAGE CABLE ASSY.
7	A866-00051-0000	POWER CABLE ASSY. - HIGH VOLTAGE
	A866-00053-0000	COIN DOOR CABLE ASSY. - NOT SHOWN
	A866-00052-0000	CONTROL PANEL CABLE ASSY. - NOT SHOWN
		ADDITIONAL PARTS LIST
	A084-91353-A866	MEMORY BOARD ASSEMBLY
	A097-00001-0000	LOCK ASSY. - BACK DOOR
	0618-00117-0000	VENT SCREEN (2 REQ'D.)
	A623-00110-0000	COIN BOX ASSY.
	A623-00013-0000	COIN BOX COVER ASSY.
	A624-00001-0000	COIN BOX GUIDE BRKT. ASSY.
	0624-00101-0000	COIN BOX GUIDE BRKT.
	0017-00101-0628	#8 - 32 x 3/4 CARRIAGE BOLT (4 REQ'D.)
	0017-00104-0022	#8 STL. WASHER (4 REQ'D.)
	0017-00103-0061	#8 - 32 LOCK NUT SEMS. (4 REQ'D.)
	0866-00905-0000	FISHPAPER SHIELD 4 IN. SQ.
	0017-00009-0419	PIN EXTRACTOR TOOL (PIN POPPER)

NO. 866 – GALAXIAN – CONTROL ASSEMBLY



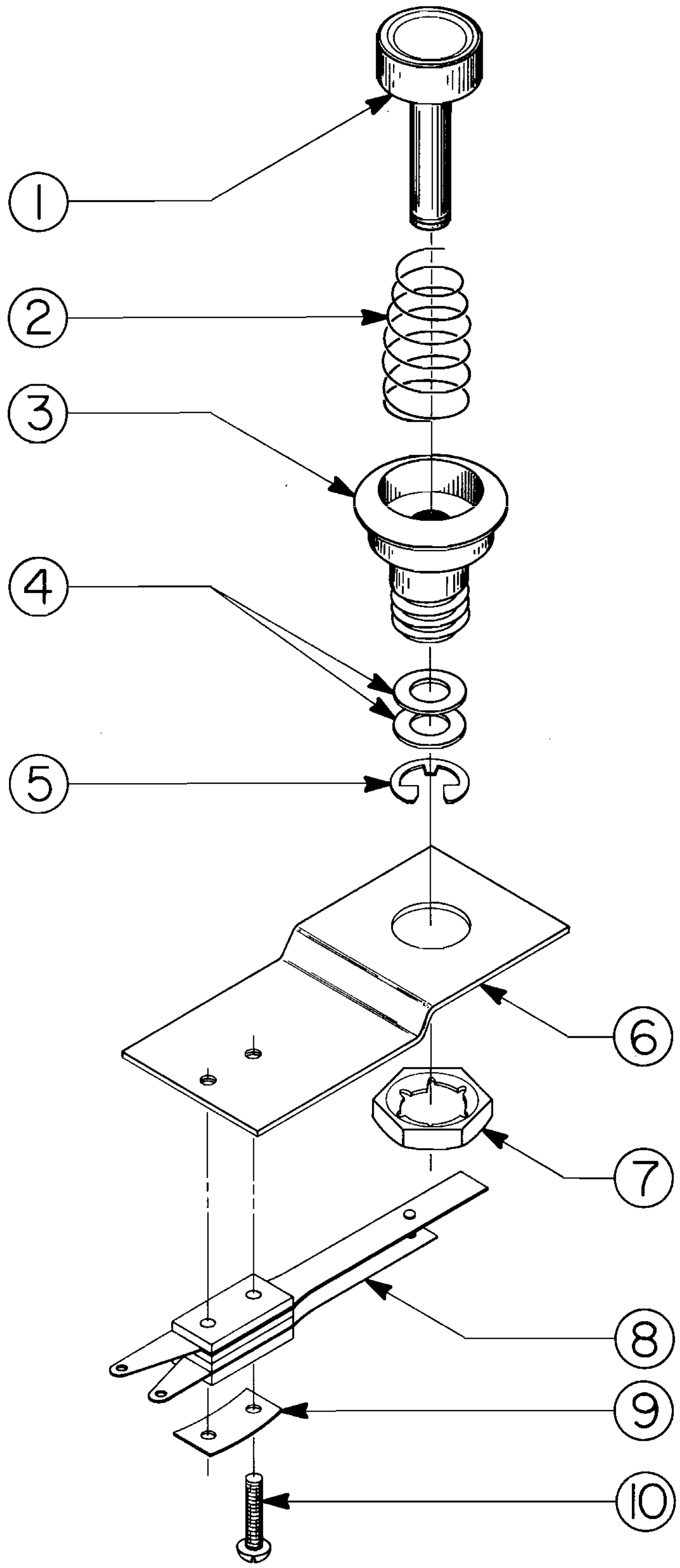
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A BALLY CO.

NO. 866 – GALAXIAN – CONTROL ASSEMBLY

ORDER BY PART NUMBER ONLY

ITEM	PART Nº	DESCRIPTION
1	A866-00028-0000	HANDLE ASSEMBLY
2	0017-00100-0025	"E"-RING
3	0852-00106-0000	PLATE - FOLLOWER
4	A852-00014-00XF	CONTROL SW. BRKT. & TOP PLATE ASSY.
5	0017-00041-0616	RUBBER BUMPER (2 REQ'D.)
6	A866-00027-0000	PIVOT BRKT. HUB & BEARING ASSY.
7	0852-00701-00XF	PIVOT ROD
8	0017-00103-0011	#10 - 32 LOCK NUT
9	0852-00101-00XF	BRACE MAIN BRKT.
10	0017-00101-0553	#6 - 32 x 1/4 SLT. PAN HD. M.S. (6 REQ'D.)
11	0017-00101-0637	#8 - 32 x 1" CARRIAGE BOLTS (4 REQ'D.)
12	0017-00104-0022	#8 STL. WASHER (4 REQ'D.)
13	0017-00103-0061	#8 - 32 HEX LOCKNUT SEMS. (4 REQ'D.)
14	0852-00103-00XF	SWITCH BRACKET (2 REQ'D.)
15	A852-00016-0000	SWITCH ASSY. (2 REQ'D.)
16	0020-00202-0000	SWITCH PLATE (2 REQ'D.)
17	0017-00101-0737	#5 - 40 x 5/8 PAN HD. M.S. (4 REQ'D.)

NO. 866 – GALAXIAN – PUSH BUTTON ASSY.

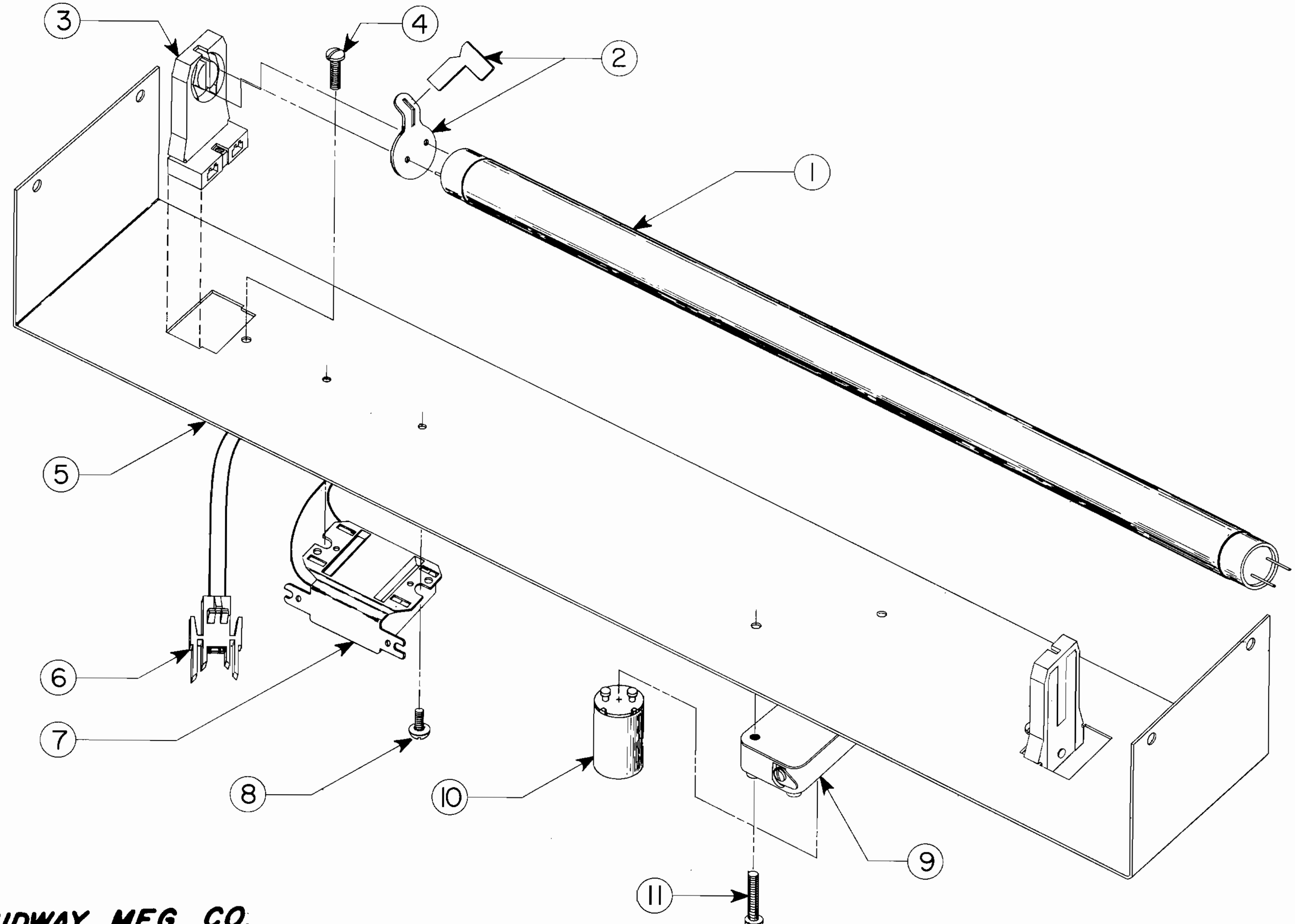


NO. 866 – GALAXIAN – PUSH BUTTON ASSY.

ORDER BY PART NUMBER ONLY

ITEM	PART Nº	DESCRIPTION
1	0017-00009-0384	BUTTON
2	0010-00593-0000	SPRING
3	0017-00009-0376	BUTTON HOUSING
4	0017-00104-0028	FLAT WASHER (2 REQ'D.)
5	0017-00100-0025	E-RING
	A739-00012-0000	PUSH BUTTON ASSY. (FIRST 5 ITEMS)
6	0586-00107-0000	MOUNTING BRKT.
7	0017-00103-0054	PAL NUT
8	A739-00016-0000	SWITCH ASSY.
9	0020-00202-0000	SWITCH PLATE
10	0017-00101-0526	#5 - 40 x 9/16 PHIL. HD. M.S. (2 REQ'D.)

NO. 866 – GALAXIAN – FLUORESCENT FIXTURE ASSEMBLY OR INCANDESCENT LIGHT ASSEMBLY



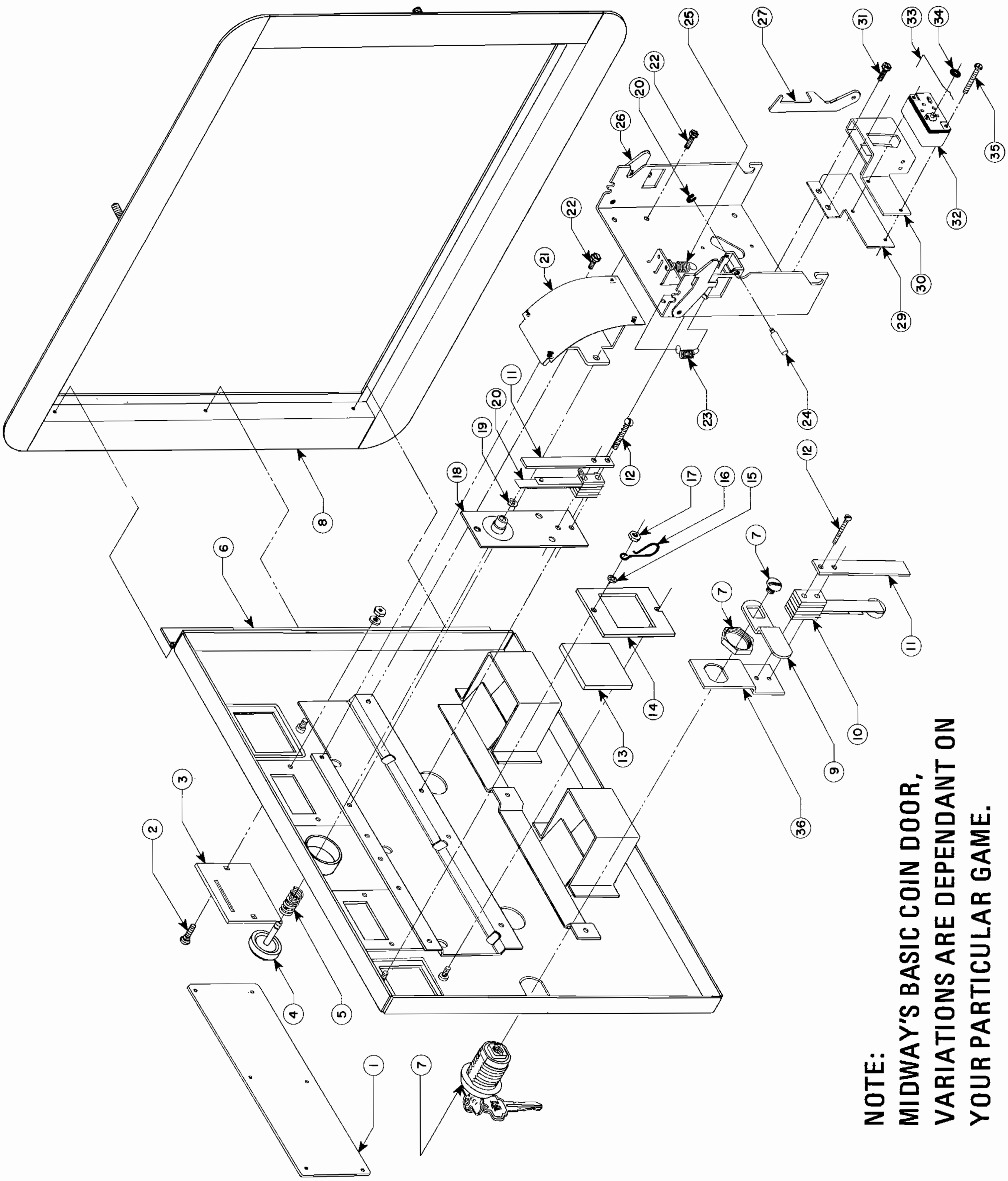
MIDWAY MFG. CO.
A BALLY COMPANY

NO. 866 – GALAXIAN – FLUORESCENT FIXTURE ASSEMBLY OR INCANDESCENT LIGHT ASSEMBLY

ORDER BY PART NUMBER ONLY

ITEM	PART No	DESCRIPTION
1	0017-00003-0043	18 IN. FLUORESCENT LAMP - COOL WHITE
2	0017-00021-0005	FLUORESCENT LOCKS (2 REQ'D.)
3	0017-00031-0036	FLUORESCENT SOCKET (2 REQ'D.)
4	0017-00101-0573	#6 - 32 x 1/2 SLT. RND. HD. M.S. (2 REQ'D.)
5	0866-00108-0000	FLUORESCENT BRKT. ASSY.
6	0017-00021-0096	2 PIN SOCKET CONNECTOR
7	0017-00003-0026	BALLAST
8	0017-00101-0593	#8 - 32 x 1/4 SLT. PAN HD. M.S. (2 REQ'D.)
9	0017-00021-0079	STARTER HOLDER
10	0017-00003-0019	STARTER
11	0017-00101-0528	#5 - 40 x 3/4 R.H.M.S. (2 REQ'D.)
	A866-00039-0000	FLUORESCENT CABLE ASSY. - NOT SHOWN
		INCANDESCENT LIGHT ASSEMBLY
		USED AFTER GAME NO. 3,000
	0866-00113-0000	SOCKET MTG. BRKT. (2 REQ'D)
	0017-00003-0135	LAMP SOCKET (2 REQ'D.)
	0017-00003-0309	LAMP 12V., 25W. (2 REQ'D.)
	0017-00101-0626	#8 - 32 x 3/4 SLT. PAN HD. M.S. (4 REQ'D.)
	0017-00103-0061	#8 - 32 HEX NUT W/SEMS. (4 REQ'D.)

NO. 866 – GALAXIAN – FRONT DOOR ASSY.



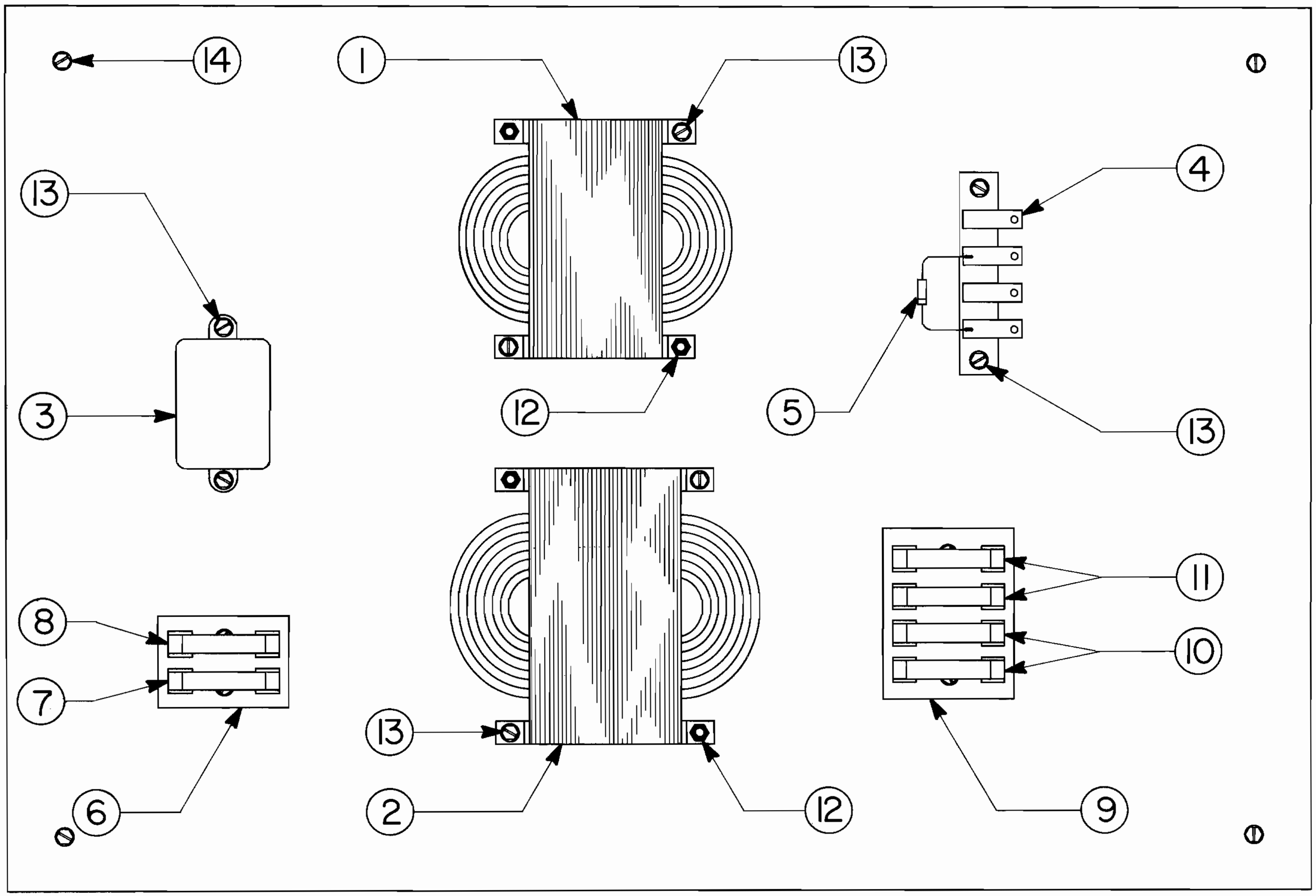
NOTE:
MIDWAY'S BASIC COIN DOOR,
VARIATIONS ARE DEPENDANT ON
YOUR PARTICULAR GAME.

NO. 866 – GALAXIAN – FRONT DOOR ASSY.

ORDER BY PART NUMBER ONLY

ITEM	PART Nº	DESCRIPTION
1	0090-00902-0000	DRESS PLATE
	0090-00902-0100	DRESS PLATE (W/O PRESS BUTTON TO START GAME)
2	0017-00101-0552	#6 - 32 x 1/4 CARRIAGE BOLT (2)
3	0090-00117-03XF	COIN ENTRY PLATE (25¢)
4	0090-00906-0000	PLASTIC START BUTTON
5	0010-00007-0000	COMPRESSION SPRING
6	0090-00013-0200	DOOR ASSY. DOUBLE ENTRY
7	0017-00005-0050	DOOR LOCK & KEY WITH SCREW & NUT
8	0090-00002-02BR	DOUBLE DOOR FRAME
9	0017-00005-0041	421 N.S. CAM
10	0090-00901-0000	DOOR SWITCH
11	0090-00126-01XF	SWITCH BACKUP PLATE
12	0017-00101-0528	#5 - 40 x 3/4" LNG. M.S.
13	0090-00903-0040	25¢ WINDOW
14	0090-00143-0000	COIN PLEX RETAINER
15	0017-00104-0002	SPLIT LOCK WASHER
16	0017-00007-0019	KEY HOOK
17	0017-00103-0005	#6 - 32 HEX NUT
18	0090-00010-0000	SW. PLATE & OILLITE ASSY.
19	0017-00100-0018	"E" RING
20	0090-00131-0000	SWITCH
21	0090-00104-0000	TOP & BTM. COIN CHUT W/BRKT. ASSY.
22	0017-00101-0598	#8 - 32 x 5/16 SCREW
23	0010-00181-0100	SPRING
24	0090-00129-00XF	PIVOT POST
25	0010-00134-0000	SPRING
26	0090-00008-0000	ACCEPTOR FRAME ASSY.
27	0093-00155-00XF	REJECTOR LEVER
28	0017-00100-0012	"E" RING
29	0093-00151-00XF	COIN GUIDE MTG. BRACKET
30	0090-00005-0000	COIN GUIDE ASSY.
31	0017-00101-0555	#6 - 32 x 5/16 SCREW
32	0017-00005-0039	COIN SWITCH
33	0010-00557-2500	TRIP WIRE
34	0017-00007-0132	PUSH-ON RING (BIK)
35	0017-00101-0507	#4 - 36 x 3/4 SCREW
36	0090-00128-00XF	SWITCH BRKT. - DOOR TILT
	A090-00061-0000	ANTI-STRING DEVICE ASSY. - OPTIONAL (REPLACES ITEM 30)
	A090-00064-0000	ANTI-PENNY DEVICE ASSY. - OPTIONAL

NO. 866 – GALAXIAN – TRANSFORMER BOARD ASSEMBLY



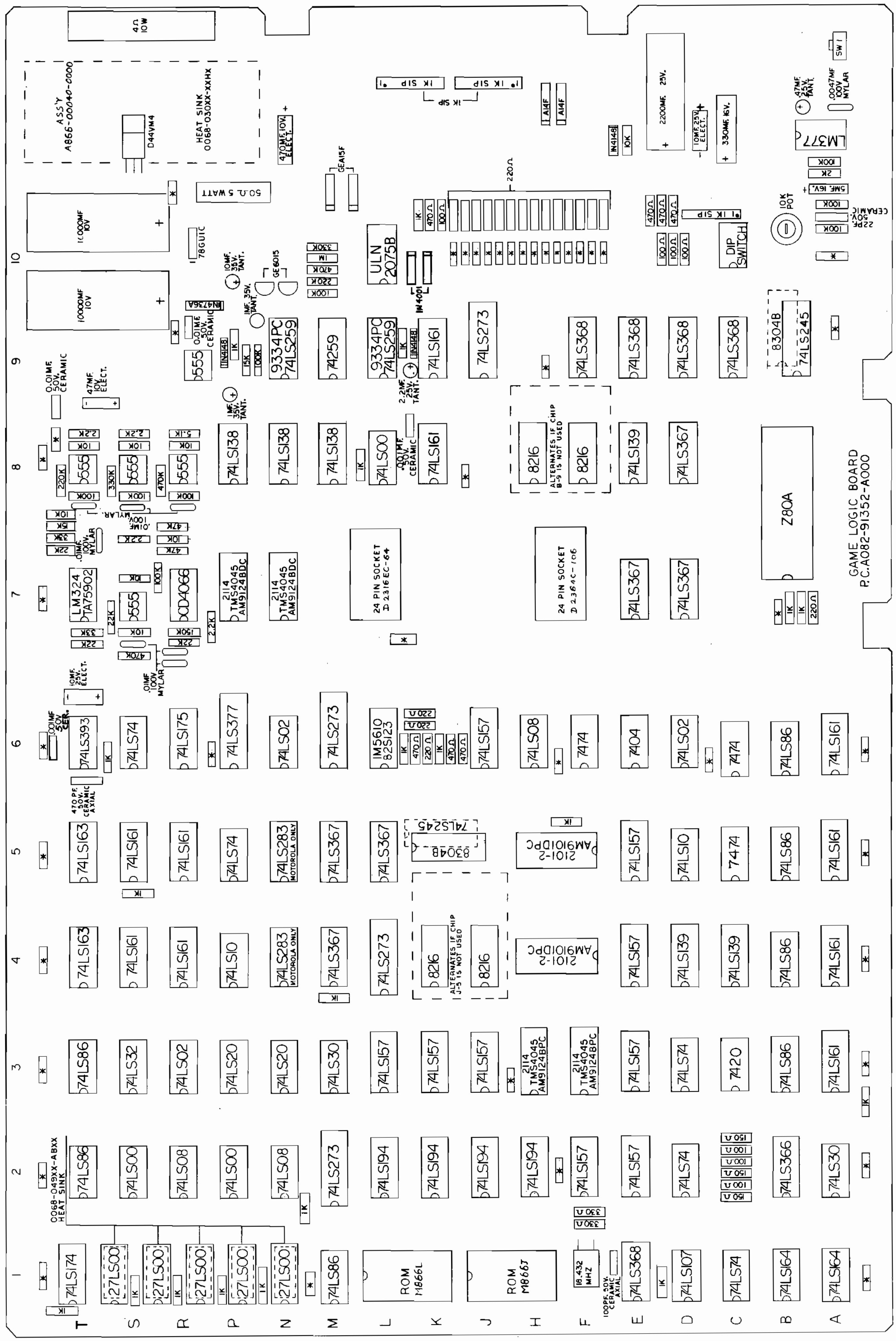
NO. 866 – GALAXIAN – TRANSFORMER BOARD ASSEMBLY

ORDER BY PART NUMBER ONLY

ITEM	PART Nº	DESCRIPTION
1	MT00-00082-0000	TRANSFORMER - 115 VOLT
2	MT00-00081-0000	TRANSFORMER - 240 VOLT
3	0017-00003-0114	NOISE FILTER
4	A031-00002-0000	TERMINAL STRIP ASSY.
5	0064-030XX-XXPX	IN4004 400 V. DIODE
6	0720-00001-0200	2 POSITION FUSE CLIP
7	0017-00003-0103	FUSE 1A. SLO-BLO
8	0017-00003-0261	FUSE 1.5A. SLO-BLO
9	0720-00001-0400	4 POSITION FUSE CLIP
10	0017-00003-0169	FUSE 5A. (2 REQ'D.)
11	0017-00003-0001	FUSE 1A. (2 REQ'D.)
12	0017-00101-0637	#8 - 32 x 1-1/4 CARRIAGE BOLT (4 REQ'D.)
	0017-00103-0008	#8 - 32 HEX NUT (4 REQ'D.)
13	0017-00101-0014	#6 x 1/2 SLT. HEX HD. WD. SCR. (12 REQ'D.)
14	0017-00101-0018	#6 x 3/4 SLT. HEX HD. WD. SCR. (4 REQ'D.)
	A866-00049-0000	LINE CORD ASSY. - NOT SHOWN

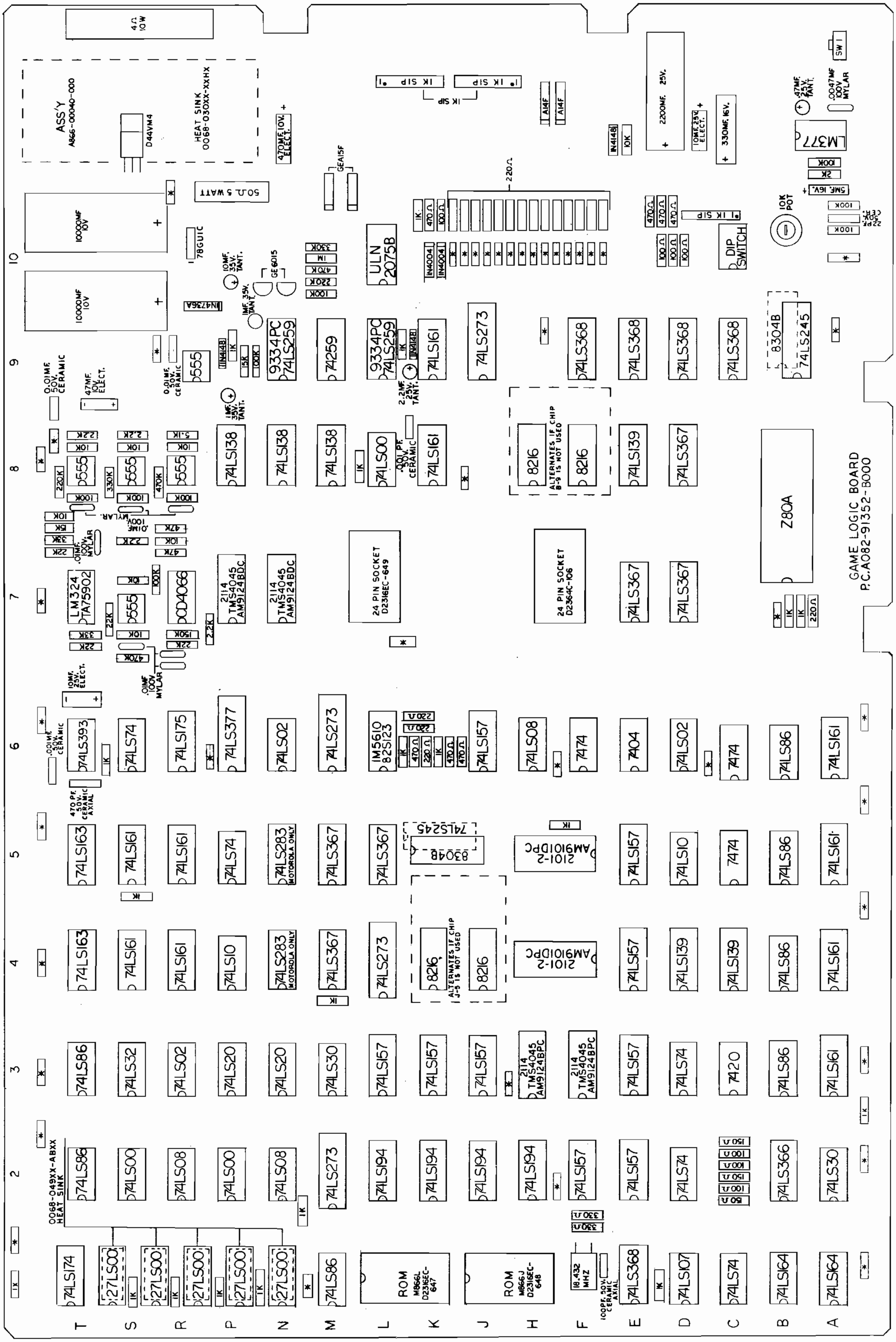
COMPONENT LAYOUT PART NO. M051-00866-A002


* INDICATES 0.1MF. 50V. AXIAL LEAD CERAMIC CAP



COMPONENT LAYOUT PART NO. M051-00866-B002

* INDICATES 0.1MF. 50V. AXIAL LEAD CERAMIC CAP.





NOTES:

1. 8 PULL-UP RESISTORS AND 26 DECOUPLING CAPACITORS ARE DISTRIBUTED OVER THE P.C. BOARD ASS'Y.
2. ONLY 1 PC 74LS245, OR 1 PC 8304B, OR 2 PC 8216 ARE USED (AND STUFFED) FOR BI-DIRECTIONAL DRIVERS (1 BYTE OF DATA).
3. SAME AS NOTE 2.
4. SUBSTITUTION FOR THESE ROM'S IS MEMORY BRD. ASS'Y A084-91353-A866

INDICATES +5V

REV.	DESC.	DATE
B	ALL 0.1MF CER. CAP. → AX. LEAD	1-20-80

MIDWAY MFG. CO.
FRANKLIN PARK, ILL.

DRN. G. RIZZO	CKD.
DATE JAN. 1980	NO. REQ'D 1
USED ON GALAXIAN	
DESC. LOGIC BOARD CIRCUITRY	
PART NO. A082-91352-A/B000	

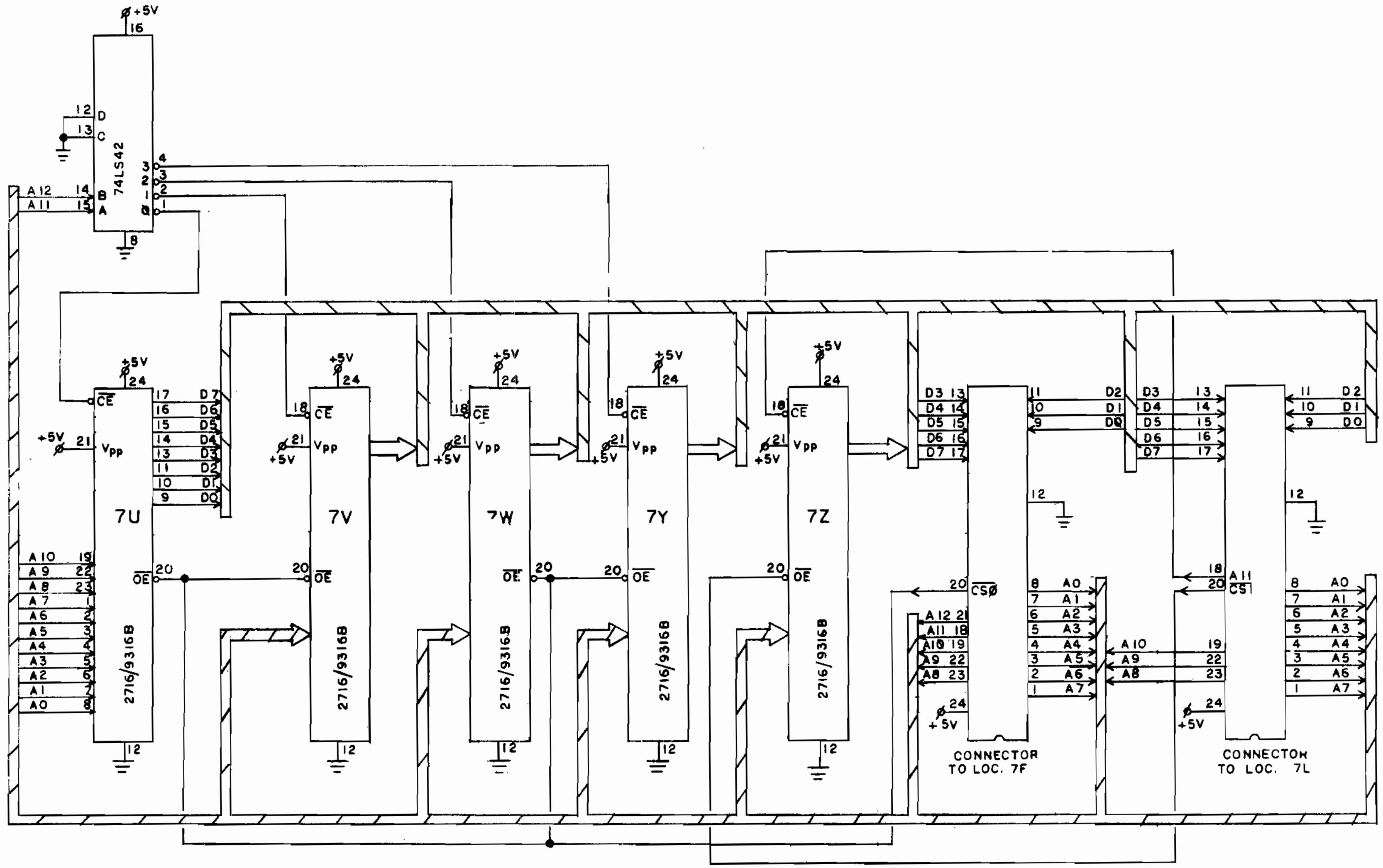
LOGIC SCHEMATIC PART NO. M051-00866-A015

GALAXIAN LOGIC BOARD

CHIP NUMBER	FUNCTION
74LS00	Quad Two Input Nand
74LS02	Quad Two Input Nor
7404	Hex Inverter
74LS08	Quad Two Input And
74LS10	Triple Three Input Nand
74LS20	Dual Four Input Nand
74LS30	Eight Input Nand
74LS32	Quad Two Input Or
74LS74	Dual "D" Flip – Flop
74LS86	Quad Two Input Exclusive Or
74LS107	Dual "JK" Flip – Flop
74LS138	Three to Eight Line Decoder
74LS139	Dual Two to Flour Line Decoder
74LS157	Quad Two Input Multiplexer
74LS161	Four Bit Counter
74LS163	Four Bit Counter
74LS164	Eight Bit Shift Register
74LS174	Hex "D" Flip – Flop
74LS175	Quad "D" Flip – Flop
74LS194	Eight Bit Shift Register
74LS259	Eight Big Addressable Latch
74LS273	Octal "D" Flip – Flop
74LS823	Four Bit Binary Adder
74LS245	Octal Bus Transceiver
74LS366	Hex Bus Driver – Inverting
74LS367	Hex Bus Driver
74LS368	Hex Bus Driver – Inverting
74LS377	Octal "D" Flip – Flop

GALAXIAN LOGIC BOARD

CHIP NUMBER	FUNCTION
74LS393	Dual Four Bit Binary Counter
27LS00	Ram
2114	Ram
TMS4045	Ram
AM9124	Ram
2102-2	Ram
AM9101	Ram
8304	Bus Driver – Bidirectional
8216	Bus Driver – Bidirectional
LM324	Quad Operational Amp
555	Timer
LM377	Audio Amp
Z80	CPU
2716	Prom – 16K
1M5610	Prom
78GUIC	Voltage Regulator
ULN2075	Quad Buffer
18.432	X-TAL
CD4066	Quad Electronic Switch
D44VM4	Transistor
GE6015	Transistor
MC14066	Quad Electronic Switch
GEA15F	Diode – Rectifier
A14F	Diode – Rectifier
IN4148	Diode – Rectifier
IN4736A	Diode – Zener
D2316EC	16K Rom
D2364C	64K Rom



MEMORY LOGIC SCHEMATIC
PART NO. M051-00866-A004

REVISIONS

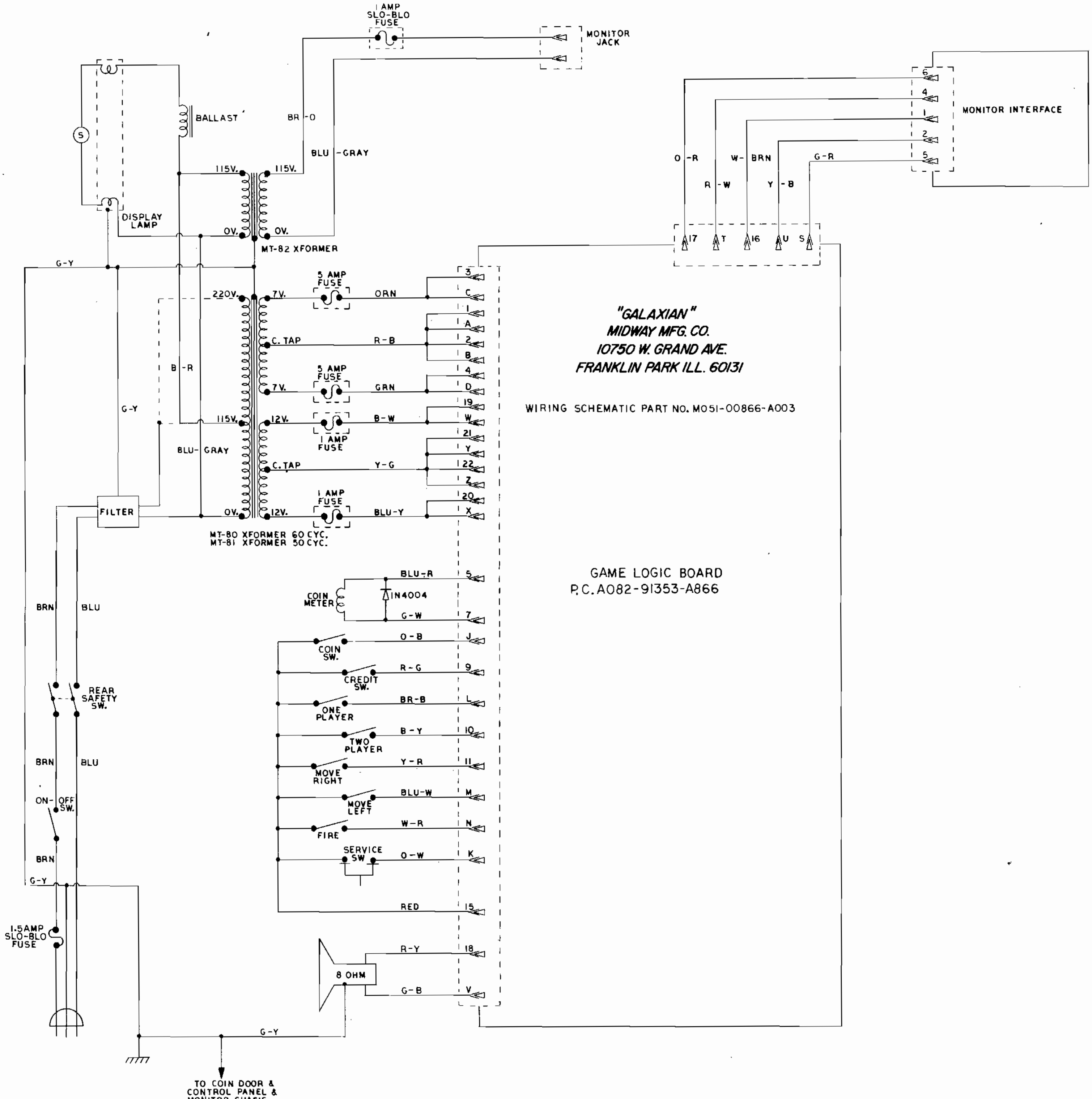
MIDWAY MFG. CO.
FRANKLIN PK. ILL.

USED ON GALAXIAN
NO. REQ'D 1

MEMORY BOARD CIRCUIT

PART NO. A082-91353-A866

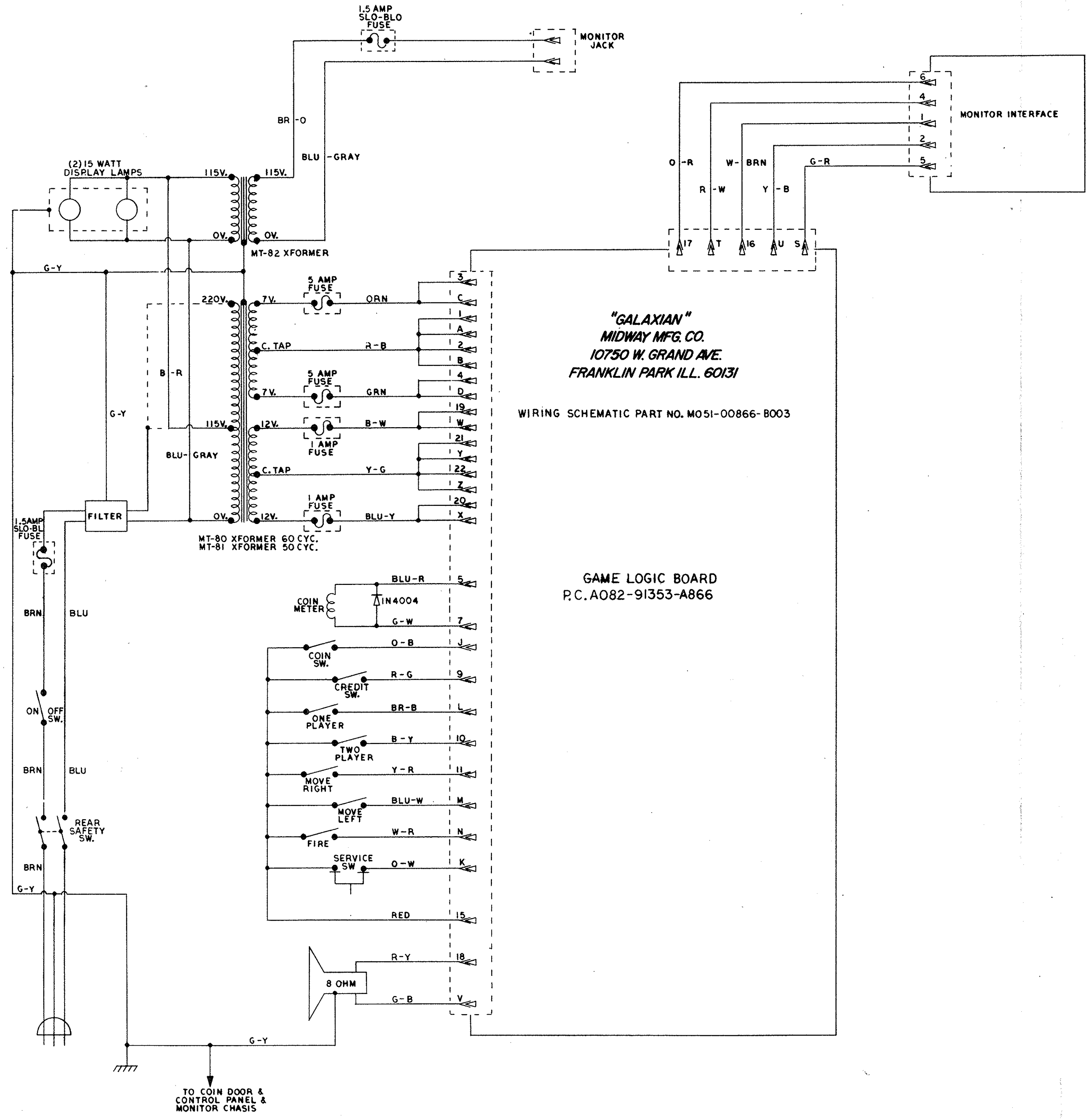
DO NOT SCALE DWG.
DIM. TOLERANCES UNLESS SPECIFIED
HEAT TREAT
SCALE
MAT'L.
FINISH
DRN.
CKD.
DATE Dec. 12 '78

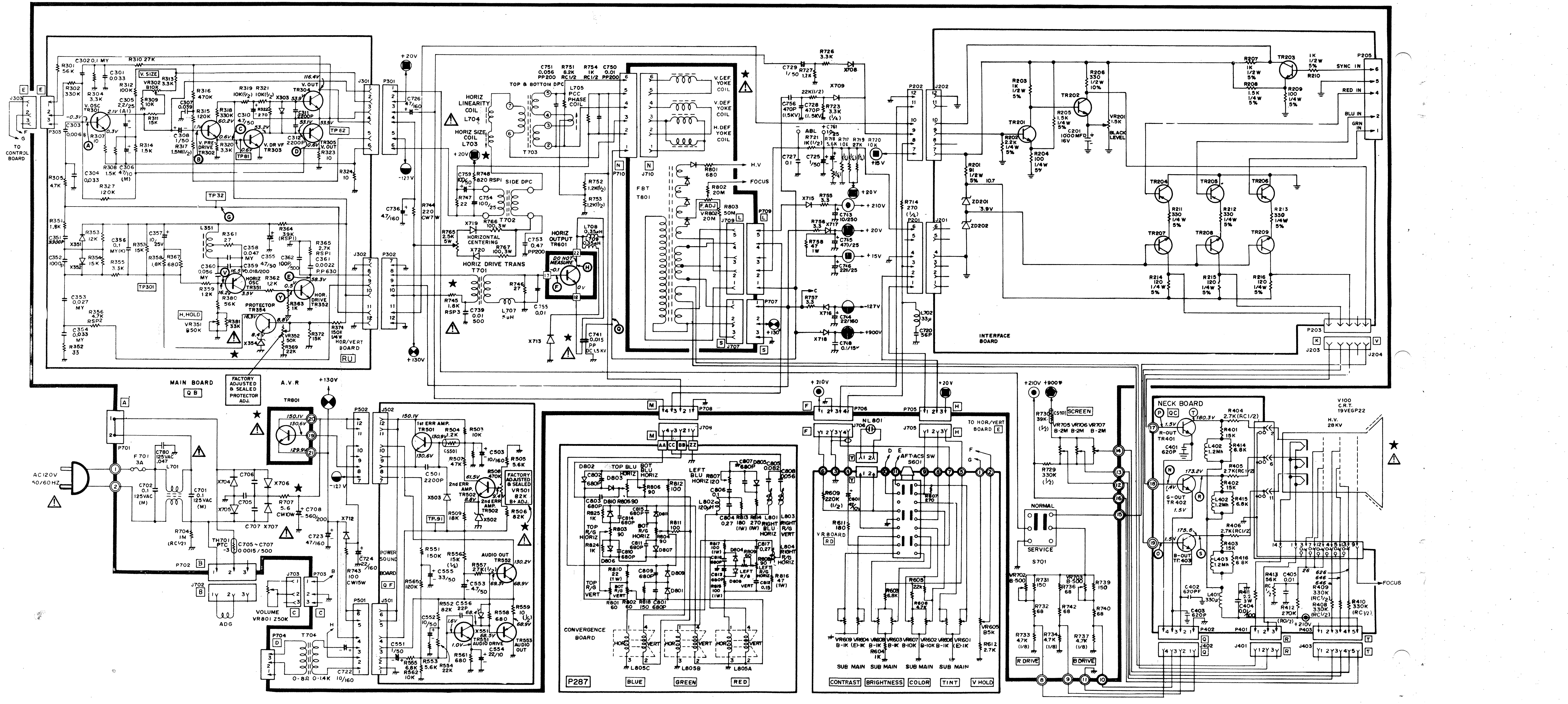


"GALAXIAN"
MIDWAY MFG. CO.
10750 W. GRAND AVE.
FRANKLIN PARK ILL. 60131

WIRING SCHEMATIC PART NO. M051-00866-A003

MIDWAY MFG. CO.
A BALLY COMPANY


"GALAXIAN"
MIDWAY MFG. CO.
10750 W. GRAND AVE.
FRANKLIN PARK ILL. 60131
WIRING SCHEMATIC PART NO. M051-00866-B003
GAME LOGIC BOARD
P.C. A082-91353-A866
MONITOR INTERFACE
MONITOR JACK
1.5 AMP SLO-BLO FUSE
(2) 15 WATT DISPLAY LAMPS
MT-82 XFORMER
MT-80 XFORMER 60 CYC.
MT-81 XFORMER 50 CYC.
FILTER
COIN METER
IN4004
COIN SW.
CREDIT SW.
ONE PLAYER
TWO PLAYER
MOVE RIGHT
MOVE LEFT
FIRE
SERVICE SW
8 OHM
ON OFF SW.
REAR SAFETY SW.
TO COIN DOOR & CONTROL PANEL & MONITOR CHASIS



WELLS-GARDNER MONITOR SCHEMATIC

MONITOR SCHEMATIC PART NO. M051-00087-A001

K4500-5789A

NOTES

This space is provided for personal notes